Claim Listing

1–12. (canceled)

13. (previously presented) A method for calendering a fibrous web in a calender which includes at least a first roll stack having three or five rolls, forming two or four pairs of rolls wherein the rolls of said roll pairs are movable with respect to each other in a direction defined by the first roll stack so as to form an open or closed nip, and a second roll stack have at least five or seven rolls forming four or six roll pairs wherein the rolls of said roll pairs are movable with respect to each other in a direction defined by the second roll stack so as to form an open or closed nip, the method comprising the steps of:

passing a fibrous web between each pair of rolls in the first stack and each pair of rolls in the second stack to form a threaded path;

moving at least one pair of rolls from said first stack or said second stack to form at least one nip therebetween;

producing a first grade of paper of selected PPS and selected Hunter Gloss % by calendering the web in the calender along the threaded path, followed by producing a second grade of paper of second selected PPS and second selected Hunter Gloss% along the threaded path by increasing or decreasing the number of nips formed by the calender.

14. (previously presented) The method of claim 13, wherein at least one roll pair in each roll stack is arranged to be in nip contact to form in each roll stack at least one nip that calenders the fibrous web.

15. (previously presented) The method of claim 13 wherein the paper web continuously passes along the threaded path while the the first paper grade is changed to the second paper grade.

16. (previously presented) The method of claim 13 wherein the rolls are arranged to produce a web with a Hunter Gloss % of less than 50 % and a PPS of greater than 2 micrometers, followed by or preceded by the roll pairs being arranged for a production of paper grades with a Hunter Gloss % of greater than 50 % and a PPS of less than 2 micrometers.

17. (previously presented) A calender, comprising:

a first roll stack having three or five rolls, forming two or four pairs of rolls wherein the rolls of said roll pairs are movable with respect to each other in a direction defined by the first roll stack so as to form an open or closed nip;

a second roll stack have at least five or seven rolls forming four or six roll pairs, wherein the rolls of said roll pairs are movable with respect to each other in a direction defined by the second roll stack so as to form an open or closed nip;

a fibrous web passing along a threaded path which runs between the rolls of each roll pair in the first roll stack and the second roll stack, wherein at least one roll pair in at least one of the first or second roll stack is in nip contact with the web therebetween, so forming at least one nip in calendering engagement with the fibrous web; and

wherein the calender is arrange to form more or less nips with the web so that different paper grades, including NP, SC, MFC, LWC and WFC grades, can be produced by regulating the number and/or nip load of the closed nips, while the fibrous web remains unbroken along the threaded path.

18. (previously presented) The calender of claim 17, wherein at least one roll pair is in nip contact in each roll stack of the calender to form in each roll stack at least one nip that calenders the fibrous web.

19. (previously presented) The calender of claim 16, wherein the calender is

selected from the group comprising OptiLoad®, Janus® and Prosoft® calenders.

20. (previously presented) The calender of claim 16, wherein the calender is selected from the group comprising: a calender having a power means which is disposed between the loading, support or relief arms of the rolls, which arms turn in a lever-like manner at one end thereof; and a calender not provided with loading, support or relief arms but based on enhanced utilization of an elastic roll coating.

21. (previously presented) The calender of claim 17, wherein all the roll pairs form nips engaging the fibrous web.

22. (previously presented) The calender of claim 17, wherein at least one of the roll pairs forms an open nip through which the fibrous web passes.

23. (previously presented) The calender of claim 17, wherein the roll pairs are arranged for the production of paper grades with a Hunter Gloss % of less than 50 % and a PPS of greater than 2 micrometers.

24. (previously presented) The calender of claim 17, wherein the the roll pairs are arranged for the production of paper grades with a Hunter Gloss % of greater than 50 % and a PPS of less than 2 micrometers.

25. (previously presented) The calender of claim 17, wherein the at least one roll stack of the calender includes carrier arms, support arms or bearing housings supporting the rolls of the roll pairs, with power means arranged therebetween to adjust the nip load, or to form an open nip or to form a closed nip between a roll pair by moving the rolls of the roll pair in a direction substantially towards each other or away from each other.

26. (previously presented) The calender of claim 25, wherein the rolls of the roll pairs have carrier arms, which carrier arms are divided into two parts by means of an articulated joint.

27. (previously presented) A method for calendering a fibrous web in a calender which includes at least two roll stacks, including a first roll stack and a second roll stack, said first stack having three or five rolls, forming two or four pairs of rolls wherein the rolls of said roll pairs are movable with respect to each other, in a direction defined by the first roll stack so as to form an open or closed nip, and said second roll stack having at least five or seven rolls forming four or six roll pairs, wherein the rolls of said roll pairs are movable with respect to each other, in a direction defined by the second roll stack so as to form an open or closed nip, and in which calender the web is passed to run between each roll pair of each roll stack, the method comprising the steps of:

disposing the rolls of each of the at least two roll stacks such that at least one roll pair is in nip contact to form a first nip;

causing the web to pass through said first nip to calender the web; and

adjusting the rolls of the at least two roll stacks to increase the number of nips through which the web passes to form a higher-quality paper grade, or to decrease the number of nips through which the web passes to form a lower-quality paper grade.

28. (previously presented) The method of claim 27, wherein at least one roll pair in each roll stack is arranged to be in nip contact to form in each roll stack at least one nip that calenders the fibrous web.

29. (previously presented) The method of claim 27, wherein the paper web continuously passes between each roll pair while the rolls are adjusted to form a higher-

quality paper grade, or to form a lower-quality paper grade.

30. (previously presented) The method of claim 27, wherein the rolls are arranged to produce a web with a Hunter Gloss % of less than 50 % and a PPS of greater than 2 micrometers, followed by or preceded by the roll pairs being arranged for a production of paper grades with a Hunter Gloss % of greater than 50 % and a PPS of less than 2 micrometers.